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United States Patent [19][11] **Patent Number:** **6,163,780****Ross**[45] **Date of Patent:** **Dec. 19, 2000**[54] **SYSTEM AND APPARATUS FOR
CONDENSING EXECUTABLE COMPUTER
SOFTWARE CODE**[75] **Inventor:** **Richard A. Ross, Berkeley, Calif.**[73] **Assignee:** **Hewlett-Packard Company, Palo Alto,
Calif.**[21] **Appl. No.:** **09/053,260**[22] **Filed:** **Apr. 1, 1998****Related U.S. Application Data**[60] **Provisional application No.** 60/060,633, Oct. 1, 1997.[51] **Int. Cl.⁷** **G06F 17/30**[52] **U.S. Cl.** **707/101**[58] **Field of Search** **707/101-103;
395/701, 705, 707, 709; 341/51, 78; 717/6,****8**[56] **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Hosain T. Alam[57] **ABSTRACT**

A system and method of condensing computer code in which canonical lists are created with index values replacing code structures within the code. More particularly, in JAVA code, condensed code is created by making canonical lists of classes, methods and fields in the code and replacing such class, method and/or field references within the code with index values corresponding to the canonical lists.

21 Claims, 12 Drawing Sheets